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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/505,356	08/19/2004	Gerald J Julien	Ice US1	5987

7590 10/17/2006  
J. Michael Neary  
53939 Pine Grove Road  
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EXAMINER

WALTERS, JOHN DANIEL

ART UNIT PAPER NUMBER

3618

DATE MAILED: 10/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/505,356		JULIEN, GERALD J	
	<b>Examiner</b>		<b>Art Unit</b>	
	John D. Walters		3618	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 October 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 and 6-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

Claims 1 – 4 and 6 – 15 have been examined. Claim 5 has been canceled by Applicant.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 – 4 and 13 – 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's disclosure in view of Abkowitz et al. (6,318,738). Applicant's disclosure states that the following physical structures are "...conventional and are well known to those skilled in the art":

- a blade body having an ice contacting bottom edge (Fig. 1, item 30);
- said blade body having a structure for engaging a blade holder (Fig. 2, item 34);
- said bottom edge having opposed corners that are sharpened (Fig. 3);
- said blade holder being connected to a boot (Fig. 1).

Abkowitz discloses titanium composite skate blades comprising:

- a titanium material blade, defined as any of the following: pure titanium, titanium alloys, or titanium matrix composites (column 2, lines 41 – 44).

Applicant has chosen "Type 60 Nitinol" as the material of choice for his invention which can be included under the category of titanium alloys. Applicant lists many

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physical properties for "Type 60 Nitinol" within claims 1 – 4. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to combine the old and well known blade structure with the titanium material of Abkowitz in order to provide improved strength, corrosion resistance, wear resistance and reduced weight (column 1, lines 59 – 62).

Claims 6 – 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over "Fabrication of Nitinol Materials and Components" taken from "Proceedings of the International Conference of Shape Memory and Superelastic Technologies, Kunming, China, P.285-292 (2001)" by Ming H. Wu.

The manufacturing processes listed within said claims, i.e. cutting, heat treating, grinding, and annealing, are all old and well known in the art. The specifics on times and temperatures which result in specific hardness values are known for various materials. In relation to Nitinol, Wu discloses:

- hot working at temperatures between 850°C and 950°C (page 2, paragraph 4);
- annealing at temperatures between 600°C and 800°C (page 2, paragraph 5);
- heat treating at temperatures between 600°C and 900°C (page 3, paragraph 3);
- aging at a temperature around 400°C (page 3, paragraph 3).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to make use of old and well known manufacturing processes at the temperatures disclosed by Wu as these standard processes are well established and workable on current machinery.

***Response to Arguments***

Applicant's arguments with respect to claims 1 – 4 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed 30 June 2006, with regards to claims 6 – 12 have been fully considered but they are not persuasive.

Applicant states, "Wu's description deals with Type 55 Nitinol...Wu teaches nothing about 60 Nitinol...Wu is not a reference to a single element of the subject matter claimed in claim 6."

Contrary to Applicant's assertion, Wu's teaching relates to Nitinol in general. Wu specifically states that, in regards to melting temperature, "For alloys having greater than 55.0 weight percent Ni, a one weight percent deviation in Ni (or Ti) concentration will result in approximately a 100°C shift in transformation temperatures." This clearly indicates that the discussion is meant to encompass the family of materials referred to as Nitinol. Nowhere in the cited report does Wu state that the discussion topic is Type 55 Nitinol. Therefore, Type 60 Nitinol is also included in the discussion.

For this reason, the rejections stand.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Buehler et al. (3,174,851) disclose nickel-base alloys;
- Sahatjian (4,909,510) discloses a ports racquet netting;
- Murai (4,952,044) discloses a metallic eyeglass frame and method for making the same;
- Wood (5,776,214) discloses a method for making abrasive grain and abrasive articles;
- Carpenter et al. (6,149,742) disclose a process for conditioning shape memory alloys;
- Johnson et al. (6,266,914) disclose spinner-type fishing lures and wire and cable fishing leaders.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John D. Walters whose telephone number is (571) 272-8269. The examiner can normally be reached on Monday - Friday, 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Ellis can be reached on (571) 272-6914. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John D. Walters  
Examiner  
Art Unit 3618

JDW



CHRISTOPHER P. ELLIS  
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TECHNOLOGY CENTER 3600